Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 10-30 are pending in this application. Claims 10, 18, 20, 28 and 30 are amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

In the Office Action dated December 18, 2007, claims 18 and 28 are objected to. Claims 10, 11, 13, 15 and 16 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Chan et al., U.S. Patent Publication No. 2003/0085163. Claims 20-28 and 30 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Peeters, U.S. Patent Publication No. 2004/0119591. Claims 12, 14, and 17-19 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chan et al. Claim 29 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Peeters.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objections to Claims 18 and 28

Claim 18 has been amended to correct a minor informality noted in the Office Action. Claim 28 has been amended to make this claim different in scope from claim 26.

Applicants respectfully request withdrawal of the objections of these claims.

Rejections under 35 U.S.C. § 102(e) based on Chan and Peeters

A number of claims stand rejected based on Chan or Peeters. Regarding Chan, all of the independent claims have been amended to make it clear that the object being inspected is the source of the radiation, and that the radiation is due to nuclear decay in the object. Support for the language of the amendment may be found throughout the specification, which describes a detector that detects radiation from objects that are being inspected. Inherently, this radiation must be different from radiation emitted by artificial sources, such as x-ray tubes, fluorescent-induced radiation, and so on – the only possible source of such radiation as contemplated in the present specification, is due to unstable nuclei in the material emitting gamma, neutron, or x-ray radiation.

Chan was the subject of an extensive discussion during the telephone interview between Applicant's representative and the Examiner. As discussed during the interview, Chan clearly discloses a stationary system, which is different from the claimed portable system. Furthermore, Chan does not provide radioisotope identification, and does not use radiation that results from nuclear decay in the object that is being infected. As further noted during the interview, in Chan, the source of the radiation is Chan's inspection system itself, not the object that is being inspected. For all these reasons, all of the claims are clearly allowable over Chan.

Peeters was also the subject of discussion during the interview. As discussed during the interview, Peeters does not have the ability to identify radiation spectra, and therefore does not have the ability to identify radioisotopes. Peeters utilizes a crystal, see paragraph 0079 of Peeters, whose resonant frequency is altered in the presence of radiation. However, this

technique does not permit the identification of energy spectrum, which is required for radioisotope identification. Thus, at least for this reason the invention as claimed in the independent claims is clearly distinguishable over Peeters.

During the telephone interview, the Examiner also requested that Applicant comment on Grodzins, U.S. Patent Publication No. 2007/0272874. As discussed with the Examiner, Grodzins utilizes an x-ray fluorescence method, where high-power x-rays are used to irradiate an object, and secondary emissions (fluorescence, or XRF) from the object are then analyzed. This may be described as elemental analysis by using their x-ray fluorescence spectrum – essentially, a chemical analysis, but it does not identify radioisotopes. . The following links may be helpful to the Examiner, and describe the difference between a spectrum generated by x-ray fluorescence, and a spectrum generated due to nuclear decay:

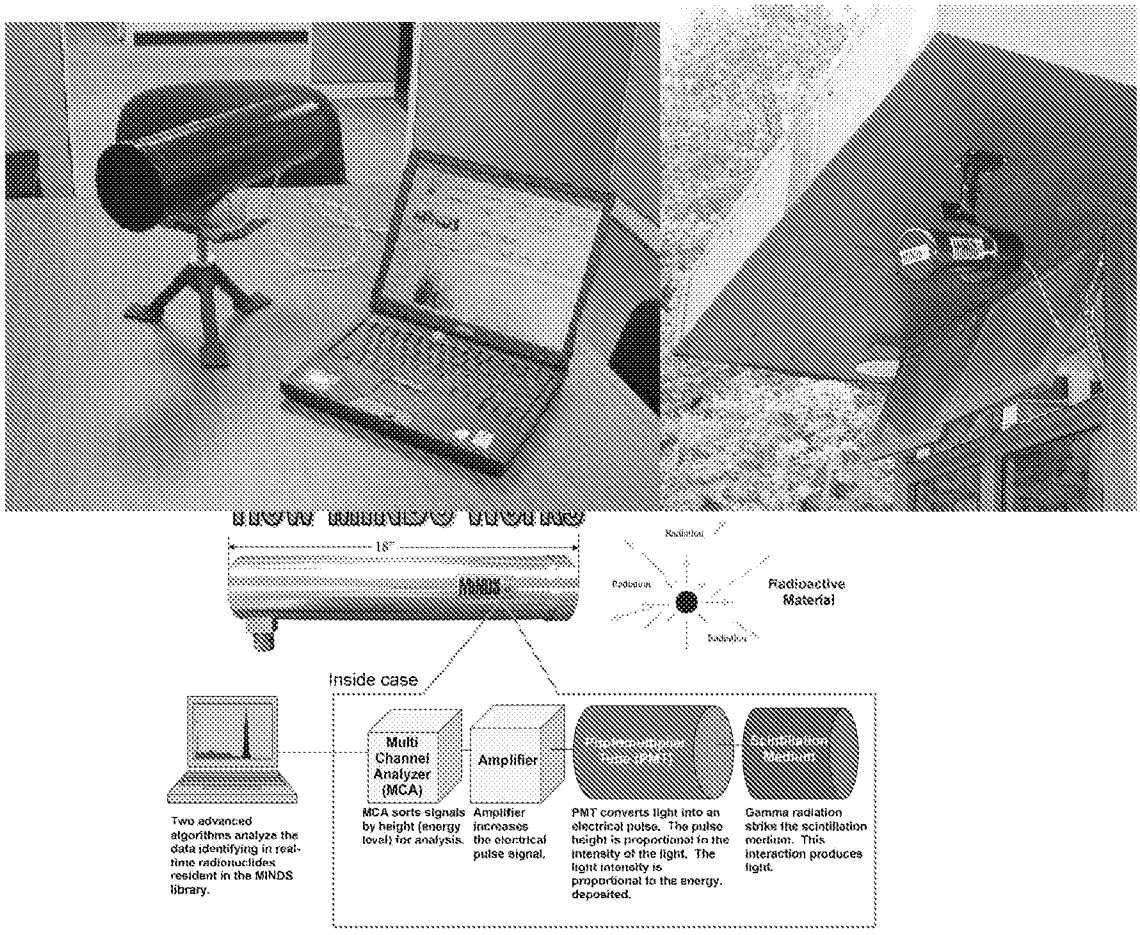
http://en.wikipedia.org/wiki/X-ray_fluorescence
http://en.wikipedia.org/wiki/Nuclear_decay
http://en.wikipedia.org/wiki/Radioisotope

These spectra of nuclear decay and XRF are different, as would be well known to one of ordinary skill in the art. Additionally, as discussed with the Examiner, although Grodzins briefly mentions connecting a computer to a network, there is no mention in Grodzins of using a remote expert system. Thus, for all of these reasons, Applicant respectfully submits that the pending claims clearly distinguish over Grodzins.

During the telephone interview, the Examiner also requested that Applicant comment on Gentile, U.S. Patent Publication No. 2005/0205799. As discussed during the interview, the

objective of Gentile is to improve the speed with which radioisotope identification is performed. To this end, Gentile uses a very large detecting element containing a large crystal inside, such as illustrated in the figures of Gentile. This is known in the industry under the brand name "MiNDS." Applicant also notes that this system is not intended to be a handheld system, much less a portable system. As these terms are commonly used in the industry, "handheld" is something that can easily be carried, typically weighing up to a few pounds. "Portable" is typically smaller, such as a mobile phone or a PDA.

The system described in Gentile is transportable, but, self-evidently, not portable. The detector is roughly the size and weight of a laptop computer, as illustrated in these photographs available at www.flcnortheast.org/Natick2007/NE_%20Reg_Excellence_in_TT_Presentation-Meixler.pdf and http://www.pppl.gov/polImage.cfm?doc_Id=30&size_code=Doc:



The system is not intended for portability, rather, as described in Gentile, and as illustrated in these photographs (and in the figures in Gentile), it is intended to be brought to a site, and then left there, for example, as a permanently fixed detector at a car or truck inspection station. Applicant also notes that attempting to reduce the size of the detector in Gentile would be counter to the purpose of Gentile – Gentile requires a very large detector, in order to collect enough "events" in the crystal in a short time. Such a huge crystal permits Gentile to reduce the detection and data collection time to a couple of seconds – reducing the size of the detector would defeat the purpose of Gentile, which is rapid detection and identification of radioisotopes.

Additionally, Gentile does not disclose an expert system as claimed in all of the independent claims, and does not disclose bi-directional communication between the detector and the expert system. Also, Gentile's detector has no display of any kind – the sole display is on the computer.

Accordingly, for all these reasons, Applicant respectfully submits that the independent claims are allowable over all these references, singly or in combination. Their dependent claims are allowable at least due to their dependence from allowable independent claims, as well as due to the features recited therein.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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